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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/731,571 | 12/07/2000 | Barbara Huff | 2585-006 | 2427 |

7590 01/05/2005

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| EXAMINER | |
|---|---|
| TRAN, ELLEN C | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2134 | |

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/731,571 | HUFF ET AL. | |
| | Examiner | Art Unit | |
| | Ellen C Tran | 2134 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the c rrespondenc address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 Augustt 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *28-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

*Detailed Action*

1. This action is responsive to communication: amendment filed on 27 August 2004, the original application was filed on 7 December 2000.

2. Due to amendment claims 28-47 are currently pending in this application. Claims 28 and 40 are independent claims.

*Claim Objections*

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 42-45 been renumbered 44-47. The claim presented as "42. (New.) The system of claim 40, wherein the user identifying information comprises a user name and password" should be renumbered "44" since it is following new claim numbered "43". The renumbering should take effect for claims indicated above. Also the claim numbers referenced within the claims needs to be updated appropriately.

*Response to Arguments*

4. Applicant's arguments with respect to claims 1-27 have been considered but are not persuasive.

In response to argument starting on page 16 **"The present invention is not concerned with the computational issues associated with user identifying data is held".** The office does not agree with the argument. The previously presented claims

did not stress the importance of the LDAP or non-LDAP structure. Therefore the cited text applicant shown is proof enough that it is well known in the art to convert the protocol used for authentication request. This is also shown in the office action below which includes U.S. Patent No. 6,539,482 Blanco et al. (hereinafter '482) to explain how protocols are translated see '482 col. 2, lines 62-67.

In response to argument starting on page 17 **"The examiner found in examining claim 4 (now canceled) that Xu '362 teaches ...The cited disclosure does not teach determining where to direct an access request based on the home region identifying information"**. The office disagrees Xu '362 col. 7, lines 40-67 shows how the referenced invention works with "home agents and foreign agents and how the home registrations agents, and work with other entities that own or manage the foreign agents". The office did not put weight on the LPAD protocol as previously stated above.

In response to argument on page 18, **"Additional, claim 28 describes a conditional authentication step not disclosed in Xu '362"**. The office does not recognize this as a valid argument since "a conditional authentication step" was not in presented in any of claims. Xu '362 teaches an authentication step in col. 4, line 44 through col. 5, line 25.

5. The applicant amended the claims by canceling claims 1-27 and adding claims 28-45; the applicant modified the independent claim by: moving the preamble into the body of the claim, incorporating previously dependent claim 4 into the independent claim, as well as some word changes; therefore the previous rejection is not applicable the following rejection applies.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 28-32, 40, 41, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al. U.S. Patent No. 6,738,362 (hereinafter '362) in further view of Blanco et al., U.S. Patent No. 6,539,482 (hereinafter '482).

**As to independent claim 28, "A method for dial roaming outside of a home service region comprising: dialing into a local dial access provider; creating an access request comprising user identifying information and home region identifying information; forwarding the access request to a corporate remote authentication dial-in user service (RADIUS) server"** is taught in '362 col. 4, lines 14-25 "In another aspect of the invention, a mobile Internet Protocol service provider system provides access to a network for a mobile node and enables the mobile node to communicate with a host on the network";

**"proxying the access request to a regional RADIUS server associated with the user's home region; comparing the user identifying information in the access request with user identifying information stored in a regional user database accessible to the regional RADIUS server; and if the user identifying information in the access request matches the stored user identifying information, then: authenticating the user; and providing configuration information to the user to**

**allow access to a network of the home region"** is shown in '362 col. 4, line 55 through col. 5, line 25 "In yet another aspect, a method is provided for authenticating a mobile node for network access. In accordance with the method, a registration request message is generated and sent from a foreign agent to a home registration agent. The registration request message contains information used to determine whether said mobile node is authorized to access a network, such as the mobile device's unique International Mobile Subscriber Identity (IMSI) number and/or its Electronic Serial Number (ESN). The home registration agent then determines from the information in the registration request message whether the mobile node is permitted to access the network. This step may be performed with the assistance of a authorization, authentication and accounting server, e.g., a RADIUS server. The home registration agent then generates a registration reply message and sends the registration; reply message from the home registration agent to the foreign agent";

the following is not disclosed in '362: **"determining from the home region identifying information whether the home region supports Lightweight Directory Access Protocol (LDAP) authentication; if the home region does not offer LDAP authentication, then"** however '482 teaches in col. 4, lines 45-53 "According to the RADIUS protocol, like for other high-level protocols such as TACACS and LDAP, information is exchanged in the form of attributes. Each attribute has a unique attribute identifier and an attribute value".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a mobile Internet Protocol service provider taught in '362 to include a means to recognize the protocol used of the home service provider. One of ordinary

skill in the art would have been motivated to perform such a modification to increase the ability to provide wireless Internet coverage see '482 (col. 4, lines 1 et seq.) "Making any authentication procedure use the directory service is however not straightforward ... they are not compatible with the protocols used for user authentication on the network, such as RADIUS and TACAS".

**As to dependent claim 29 "wherein the access request is forwarded to an access provider via a network access server (NAS)"** is disclosed in '362 col. 3, lines 41-48 "such as a general purpose computer or network access server on the visited network".

**As to dependent claim 30, "wherein the NAS functions as a client of the corporate RADIUS server"** is taught in '362 col. 7, lines 39-60 "The wireless communication service provider may furnish all the basic elements for providing mobile IP services, ... Or, the entity may simpley provide home tunneling and home registration agents, and work with other entities that own or manage the foreign agents ... Another example would be an AAA or RADIUS server"

**As to dependent claim 31, "further comprising: if the home region offers LDAP authentication, then forwarding the access request to a regional LDAP database"** is disclosed in '482 col. 3, lines 56-57 "The directory is accessible through a network client using the appropriate protocol (an LDAP client 12 in FIG. 1)".

**As to dependent claim 32, "further comprising comparing the user identifying information in the access request with user identifying information stored in a regional user- database accessible to the regional LDAP database"** is shown in '482 col. 3, lines 58-62 "goal of the invention is to make any authentication

procedure on the network use the authentication data stored in the directory. In this manner, since the same authentication data is accessible to all the authentication procedures, this authentication data in principle only needs to contain one user identifier and one password".

**As to independent claim 40,** this claim is directed to the system of method claim 28 and is rejected along similar rationale.

**As to dependent claim 41,** this claim contains substantially similar subject matter as dependent claims 29 and 30; therefore it is rejected along the same rationale.

**As to dependent claim 42,** this claim contains substantially similar subject matter as dependent claim 31; therefore it is rejected along the same rationale.

8. **Claims 33-37, and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over '362, in further view of '482 in further view of Liu et al., U.S. Patent No. 5,898,780 (hereinafter '780).

**As to dependent claim 33,** the following is not taught in the combination of teachings of '362 and '482: **"further comprising the regional LDAP database sending an "accept" message if the user is in the regional LDAP database and a "deny" message if the user is not in the regional LDAP database"** however '780 teaches "transmits a message to the server 132 either stating that the user 144 should be granted or denied internet access" in col. 4, lines 50-65

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a mobile Internet Protocol service provider that uses LDAP data structure taught in '362 and '482 to include a means to recognize the home service provider. One of ordinary skill in the art would have been motivated to perform such a

modification to increase the ability to provide wireless Internet coverage see '780 (col. 1, lines 9 et seq.) "The apparatus of the present invention comprises a server or servers that can recognize the domain name of the home ISP".

**As to dependent claim 34, "wherein the user identifying information comprises a user name and password"** is disclosed in '780 col. 4, lines 50-61 "Block 162 indicates that the server 136 includes software attempts to match the "roaming" login information in an entry in a lob table in the server 136".

**As to dependent claim 35, "wherein the home region identifying information comprises a component of the user name"** is taught in '780 col. 1, lines 25-27 "the user logs on to the local network of the foreign internet service provider using an identifier that includes the user's identification term, an identification term for the server of the home ISP".

**As to dependent claim 36, "wherein the user name comprises an email address of the user"** is shown in '780 col. 1, lines 31-33 "For example, the user might log o to the local network of the local ISP by using a standard e-mail address such as jdoe@aimnet.com. Followed by the user's secret password".

**As to dependent claim 37, "wherein comparing the user identifying information in the access request with user identifying information stored in a regional user database accessible to the regional RADIUS server comprises comparing the user password in the access request with a user password stored in a regional user database accessible to the regional RADIUS server"** is disclosed in '780 col. 4, lines 50-61 "Block 162 indicates that the server 136 includes software attempts to match the "roaming" login information in an entry in a lob table in the server 136".

**As to dependent claims 43 and 44,** these claims contain substantially similar subject matter as dependent claims 33 and 34; therefore they arerejected along the same rationale.

9. **Claims 38, 39, 45, 46, and 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over '362 in further view of '482, in further view of '780 and in further view of Xu et al., U.S. Patent No. 6,151,628 (hereinafter '628).

**As to dependent claim 38,** the following is not taught in the combination '362, 482, and '780: **"wherein the user password comprises a first hashed value and wherein comparing the user password in the access request with a user password stored in a regional user database accessible to the regional RADIUS server comprises: determining at the regional RADIUS server a hashing algorithm used to create the first hashed value; obtaining the stored password in clear text format; applying the hashing algorithm to the clear text stored password to produce a second hashed value; and comparing the first hashed value to the second hash value"** however '628 teaches "In a preferred network access embodiment of the invention, a second phase authentication routine is employed to verify that the remote user is authorized to access the designated network. This is accomplished by conducting a password authentication procedure such PAP or CHAP routine both of which are known in the art" in col. 9, lines 48-57.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a mobile Internet Protocol service provider which uses a LDAP data structure with ability to recognize ISP provider taught in the combination of '362, '482, and '780 to include a means provide additional security. One of ordinary skill in the art

would have been motivated to perform such a modification to increase the ability of Internet service providers to serve many users see '628 (col. 2, lines 1 et seq.) "The present invention also provides for network access methods by which a network access server, in combination with one or more authentication servers, can provide Internet and corporate network authentication and access ".

**As to dependent claim 39, "wherein the hashing algorithm is CHAP"** is taught in '628 col. 9, lines 48-57.

**As to dependent claim 45, 46, and 47,** these claims contain substantially similar subject matter as dependent claims 38 and 39; therefore they are rejected along the same rationale.

**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen C Tran whose telephone number is (571) 272-3842. The examiner can normally be reached from 6:30 am to 3:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A Morse can be reached on (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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21 December 2004

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